

GEOGRAPHIC SCHOOL BULLETINS

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

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March 12, 1945. Vol. XXIII. No. 22.

1. Saxony, Germany's Midsection, Feels War Pressure
 2. Bombed Bangkok at Gate of Japan's Supply Line to Burma
 3. Explorers' Lust for Gold Shows in Geographic Place Names
 4. Maple Sugar Helps Out Overworked Beet and Cane
 5. Geo-Graphic Brevities: Iwo Jima—Boxes—Burr Prize
-

BOUGAINVILLE HOUSEBOYS BEAM HAPPILY OVER A PACKAGE OF SAGO

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HOW TEACHERS MAY OBTAIN THE BULLETINS

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Saxony, Germany's Midsection, Feels War Pressure

SAXONY, feeling the pressure of Soviet land might, and absorbing the concerted blows of British and American air forces, is the western neighbor of Soviet-conquered Silesia. It is one of Germany's most valuable states, ranking third in population and sixth in area. It led the Reich in the production of textiles, used its farms and forests thriftily, profitably worked mines among the oldest in Germany, and made Dresden china known through the civilized world.

Lying for the most part in the basin shaped by the upper Elbe and its tributaries—the Elster, the Pleisse, and the Mulde—Saxony is a little larger than Connecticut. Roughly triangular, it has a frontier of about 760 miles.

The "Bad" Lands of Saxony Contain Watering Resorts

Along the southern border shared with Czechoslovakia rise the Elster, Erz, and Lausitzer mountains, with some peaks topping 3,000 feet. From this high southern exposure the land slopes northward, dropping to 500 feet at the frontier. Sandstone formations are a feature of the highlands.

The scenic region between the Czechoslovak border and Pirna on the Elbe River has become known as the Saxon Switzerland. Lakes, flecking the north, are notable for number rather than size. Mineral springs are common, providing the reasons for such resorts as Bad Elster, Augustabad, and Bad Schandau. Bad means bath.

Low temperatures rule in the highlands, the so-called Vogtland. Annual averages for the state range around 48 degrees Fahrenheit. In the Erz Mountains the year's rainfall is normally between 27 and 34 inches; the amount decreases to the northward. Marshy tracts along the Elbe and the Pleisse are unhealthful.

Traditional farming methods long retarded progress of Saxony's agriculture, despite fertile soil. Modern ways were taking hold before the outbreak of the war. The chief crops were rye, oats, potatoes, beets, and flax. Cherries, plums, and apples were fruit specialties grown in large quantities. Vineyards flanked stretches of the Elbe. Cattle raising was increasing; sheep herding was declining.

Water Power Turned Half the Factory Wheels

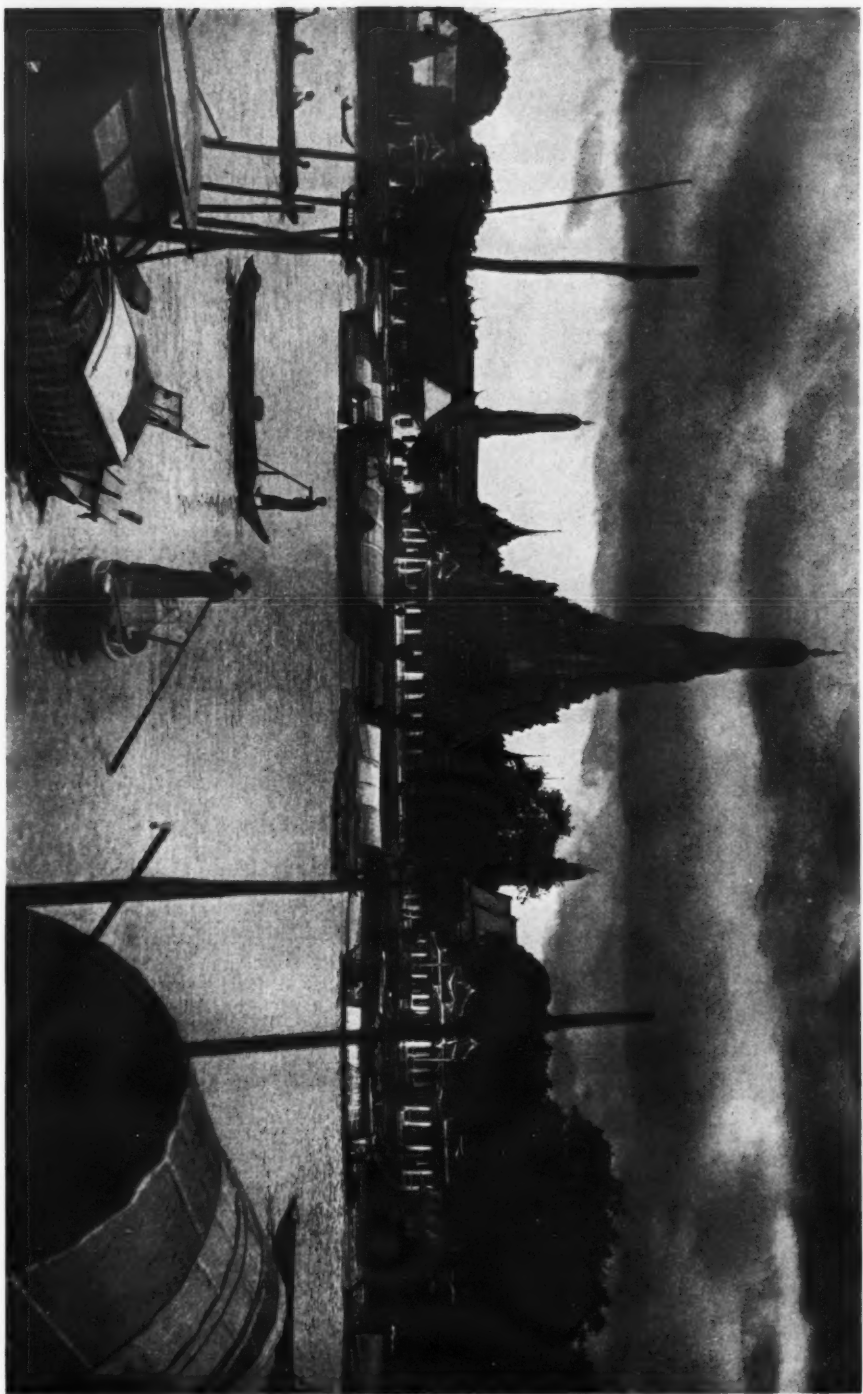
Textile products were important in both volume and variety. Goods of cotton, wool, and linen, and damask and lace wares were staples. Mineral resources include coal, iron, lead, copper, zinc, tin, cobalt, and nickel. Amethysts and topazes are found in the mountains. Sizable ceramic industries were founded on the availability of porcelain clay.

Smelting and processing metal ores have been major industries. Prewar manufacturing ranged from artificial flowers and wax cloth (oilcloth) to printing presses, sewing machines, marine engines, and steam locomotives. Breweries and distilleries were familiar industrial operations. Water power turned half the wheels in Saxony's factories.

Good roads link the chief cities, and connect with the German highway network. More than 2,000 miles of railways crisscross the state. The only navigable river is the Elbe.

Two of Saxony's cities, Dresden on the Elbe, the capital, with 625,174 prewar residents, and Leipzig on the Elster, university town and international trade fair

Bulletin No. 1, March 12, 1945 (over).



Maynard Owen Williams

THE 242-FOOT PRANG (TOWER) OF BANGKOK'S WAT ARUN (TEMPLE OF DAWN) RISES LIKE A WEDDING CAKE BESIDE THE BUSY ME NAM

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Bombed Bangkok at Gate of Japan's Supply Line to Burma

BANGKOK (Krung Thep), Thailand's capital, where United States Air Forces have bombed the railway leading to Japan's beleaguered garrisons in Burma, has been a seat of government only a few years longer than Washington, D. C.

A village which is now Bangkok's suburb, Tonburi, became the capital of the country in 1767 when Ayudhya (Ayuthia, Ayutthaya), the 14th century capital, was destroyed in a war with the Burmese. When Rama I, first of the Chakkri kings, ascended the throne in 1782, he chose a site across the river for the capital. Here grew up the Bangkok which in 1932 celebrated, with "more than Oriental splendor," the 150th anniversary of its founding, and of the establishing of the Chakkri dynasty—the present ruling house.

Bangkok Sometimes Called "the Venice of the Orient"

Bangkok sprawls along the banks of the Me Nam Chao Phraya (Royal Mother of Waters) about 20 miles upstream from the river's outlet into the Gulf of Siam. The old river village has developed a triple personality: the city proper; the palace area, where about a mile of stone walls enclose the royal residence and government offices; and the floating town. The latter section is a cluster of houses built on bamboo rafts moored along the river banks.

Most of the city has spread along the eastern bank of the river, where Rama I began it.

For more than a century the river was Bangkok's main street. A network of canals provided cross streets (illustration, next page). Because of this pattern of waterways, with its bridges and small boat traffic, Bangkok is sometimes called "the Venice of the Orient."

During the latter part of the 19th century and the early years of the 20th modern progress brought changes to Bangkok. Land streets displaced canals; floating houses disappeared, replaced by brick dwellings. Streetcars and automobiles crowded the hand-carts and rickshas in the city's narrow main street, New Road. Avenues in many residential areas are wide and well paved. The royal palace and homes of the nobility are built of stone and set in tree-shaded tropical gardens.

The towering spires and gilded gables of Bangkok's many temples (illustration, inside cover) give the city architectural distinction. Their curving roof lines, glittering with insets of colored glass and porcelain, their walls decorated with mosaics and frescoes, reflect the native skills and tastes.

About one-fifth of the 10-square-mile area of the city is taken up by the more than 300 temples and their surrounding park-like grounds.

Many Races Run Bangkok's Business

Bangkok is a city of many races. With a prewar population of about 750,000, it is Thailand's only real city. About 85 per cent of the country's trade is centered there. Chinese shops and Chinese people are everywhere. European firms did a thriving business. East Indians operated bazaars dealing in silks, gems, and curios. The Japanese commercially invaded Bangkok long before the war.

More than 80 per cent of the population of the country are farmers. Most of the city-dwellers were in government service, less than 3 per cent in industry.

Bangkok's climate is hot and humid. In summer the temperature runs above

site (illustration, below), with 701,616 citizens, were among Germany's largest, ranking respectively eighth and sixth. Chemnitz, a textile center in the south, stood next with its 334,500 people. Plauen, lacemaking town in the southwest, followed in rank with 110,340. Other important communities, all under 100,000, are Zwickau, Meissen, Bautzen, Zittau, Freiberg, and Freital.

Saxony bears a name that had done double duty. It first labeled an area in northwest Germany whence came the Saxons who invaded and settled England in the 5th century. This territory became a duchy, was broken up in 1180. The name Saxony was almost lost, serving only to identify scattered parts of the former duchy. One such part became the core of modern Saxony after Frederick, Margrave of Meissen, was made Elector of Saxony. The name was stretched to cover the possessions of this prince and his descendants.

Saxony fought against France in the Seven Years War, but sided with Napoleon, and acquired large slices of territory through this alliance. After Waterloo much Saxon territory was ceded to Prussia. In the Franco-Prussian War of 1870 Saxony fought with the other German states against France.

Until 1918 the government was a constitutional monarchy within the German Empire. A republic was set up in 1918, and a provisional government was given authority. Political upheavals in 1919 resulted in a Soviet Republic of brief duration. A new constitution was drafted and put into effect in 1920, with Saxony again forming part of Germany.

The State of Saxony should not be confused with the Prussian Province of Saxony, which lies to the north.

Note: Saxony may be located on the National Geographic Society's Map of Germany and Its Approaches, which was a supplement to the July, 1944, issue of the *National Geographic Magazine*. A price list of maps may be obtained from the Society's headquarters, Washington 6, D. C.

Bulletin No. 1,
March 12, 1945.



A CLOCK-PEDDLER SHOWS HIS WARES DURING A LEIPZIG FAIR

This sturdily shod hawker came from the Black Forest, a region noted for clock-making. From every other quarter of Germany, from most European countries, and from many Asiatic lands came countless small- and big-time buyers and sellers to Leipzig's famous trade fairs. The largest fairs are normally held near Easter and in September, a smaller one at the first of the year, and still smaller ones at other times. The earliest Leipzig fairs were held in the 12th century.

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Explorers' Lust for Gold Shows in Geographic Place Names

GOLD—actual or visionary—sped the winning of land in every quarter of the globe just as it sped the winning of the American West (illustration, next page). This fact is revealed in scores of geographic place names in all the continents.

Mindoro, Philippine island which United States troops took in preparation for the invasion of Luzon, is a contraction of Mina de Oro, Spanish for mine of gold. This densely forested, mountainous island still hides its wealth of precious minerals, if any. But Magellan's name for it, applied in the 16th century, had sales appeal to kings, to money barons, and to other explorers, so it stuck.

Gold Named the Solomons

A few hundred miles southeast of Mindoro and the Philippines a much larger and even wilder island was named Isla de Oro (isle of gold) by the Spaniard Saavedra in 1527. Later explorers renamed it New Guinea because the natives along its coasts resembled those of Africa's Guinea Coast more than they resembled the light-skinned Polynesians of neighboring Pacific islands to the east. The gold of this so-called Isle of Gold remained virtually a myth until early in the present century. In recent prewar years, gold, flown by planes from fields in New Guinea's northeastern highlands to coast ports, exceeded \$15,000,000 in value annually.

In 1568 Mendaña discovered and named the Solomon Islands (illustration, cover), which trail off to the southeast of bird-shaped New Guinea like feathers shaken from its tail. The name encouraged the legend that this chain of islands was the source of gold for Solomon's temple in Jerusalem. For two full centuries after Mendaña's visit Pacific explorers failed to come upon these fabulous islands, and the legend of their elusive gold grew. Recently war has put the Solomons in a brighter limelight than even a gold rush could have done.

Halfway around the world, along Africa's Guinea Coast that gave New Guinea its name, is Great Britain's Gold Coast Colony. Famed for 17th-century slave traffic, it was first known to Portuguese navigators a century before Columbus. Gold found in the sand of its rivers gave the region its name. Found later in quartz veins and rock beds, the yellow metal was well established as the colony's leading prewar export in terms of money value.

Northwestward around the bulge of Africa's west coast, Spain's colony of Rio de Oro is a doubly misnamed desert region about as large as Nevada, without rivers and without gold. Its name came from a 16-mile, fingerlike bay along the southern end of its coast, which early Portuguese explorers called Rio de Oro. Harboring there to barter with natives for gold dust, they envisioned the bay as the mouth of a river reaching across Africa from the region of the Nile.

A River of Silver Flows Through Argentina

The Spanish oro (gold) and plata (silver) appear on detailed maps of Western Hemisphere areas in considerable number and in varied form. One of the commonest forms of oro is found in the name El Dorado, attached to a score of towns and districts in the United States.

El dorado means the gilded one. Applied early in the 16th century to the chief of a South American Indian tribe who is said to have officiated at a yearly festival coated with gold dust, it was later used as the name of a mythical Andean

100 degrees Fahrenheit. In winter it seldom falls below 65 degrees. The rainfall usually totals more than 50 inches annually. Most of it comes between April and November.

A network of railways radiating from Bangkok linked the capital to the inland towns of the country, to French Indochina, Burma, and the Malay Peninsula. Steamers connected the city with the ports of Singapore, Saigon, and Hong Kong. Airlines connected it with Chiang Mai (Chiengmai) to the north, and Phuket, tin ore port halfway down the west coast of the Malay Peninsula.

In 1943 it was reported that the occupying Japs were to move the puppet government from Bangkok to the safety of the remote inland village of Petchabun (Phetchabun), 190 miles to the north.

Note: Bangkok is shown on the Society's Map of Southeast Asia, which appeared as a supplement to the October, 1944, issue of the *National Geographic Magazine*.

For additional information, see "Temples and Guns in Thailand" (10 photographs), in the *National Geographic Magazine* for November, 1941*; and "Land of the Free in Asia," May, 1934*; and "Japs Transfer Thailand's Capital to the Jungle" (Geo-Graphic Brevity), in the GEOGRAPHIC SCHOOL BULLETINS, November 29, 1943.

Bulletin No. 2, March 12, 1945.



Ernest B. Schoedsack

BANGKOK'S MARKETING HOUSEWIVES SHOP BY BOAT

This watery side street, like many of Bangkok's thoroughfares, is a canal leading from the river. Small pointed-bow boats, propelled by long-handled oars, take the place of the automobiles in which American housewives bring home the family provisions. Fruit and vegetables are sold at the stalls that line the wharves (right background) or from boats on the canal, like that filled to the gunwales with luscious melons (foreground). On some boats woven straw mats cast shade over the occupants; on others a gay umbrella shields buyer and seller from the glaring tropical sun.

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Maple Sugar Helps Out Overworked Beet and Cane

MAPLE trees are about to present their annual contribution to the nation's sugar crop. With war multiplying sugar requirements and dividing the shipping space needed to bring it back from cane-growing regions such as Hawaii, Cuba, and Puerto Rico, maple sugar is a small but welcome addition to the country's supply of beet and cane sugar.

America's tree-grown sugar crop, now moving toward harvest, comes chiefly from the northern tier of states, reaching from New England to the Great Lakes.

As spring moves northward nature raises the sap in the sugar maples. It sets the stage for a seasonal industry steeped in Colonial tradition, and more practical than ever today when the United States must help to feed war-stricken countries overseas.

Maple Sugar Production Declined Between Wars

The chief producers are the New England States, and New York, Pennsylvania, Ohio, Michigan, Indiana, and Wisconsin. Some sirup and sugar are imported from Canada's provinces, Quebec and Ontario. Tapping time usually runs from mid-March to mid-April, but occasionally begins as early as the first week in February, and sometimes continues into May.

The processing of the sap is a big business in Vermont, with New York a close second. The number of trees tapped in a single season has totaled 5,000,000. The annual revenue from maple products sometimes runs above \$2,000,000. Sirup is brought in from other states to keep Vermont's processing plants busy. It is shipped out in 50-gallon drums to retailers to be sold in a wide variety of containers.

The production of maple sugar has declined rather steadily. In the period 1917-1920, the national average was about 21,500 tons of 2,000 pounds. By 1940 the annual output had dropped to 10,000 tons. This was a mere thimbleful tossed into a national sugar bowl annually requiring 5,500,000 tons (mostly cane and beet sugar) to fill it.

Some of the reasons why maple sugar production has fallen off relate to war-time needs for maple lumber, veneer, and plywood. Labor shortages and the demands on farmers for other crops would lessen production even if the number of trees remained constant.

Maple-sugar-making was an old Indian custom when the first colonists arrived in North America. The "sugar-making moon" was an established period. The pioneers adopted the Indian custom of tapping the maples, but their methods were crude and wasteful. By careless hacking with the ax they killed many trees.

A Snowball Tests for Sugar

In the early days a wooden spout set in a notch in the tree guided the sap into a wooden trough holding from eight to ten quarts. When these troughs were full the sap was collected in buckets hung from a yoke worn over the shoulders of the tree tender.

The sap was poured into a large iron caldron and "set aboilin' down." Heat turned the colorless sap to a golden, bubbling mass of sirup, ready for pouring into jars—liquid sweetness for breakfast pancakes.

A rule of thumb controlled the kettle sorcery. When the sirup clung to the

city rich in gold and diamonds. Several Spanish explorers sought it without success, as did England's Sir Walter Raleigh in 1595. The name has become a metaphor to describe any place where easy wealth is presumed to await the seeker.

Eldorado, Kansas, however, was named for a particularly beautiful sunset which impressed the founders. The town has become a modern *el dorado* by reason of large near-by oil fields.

Argentina is perhaps the best-known geographic name in either hemisphere to be derived from the Latin *argentum*, meaning silver. Its principal river is the Río de la Plata—the River of Silver. Slavic Europe has a sprinkling of Zlato- and Zoloto-towns. Like Goldberg in Germany's Prussian province of Silesia and Goldfield, Nevada, they got their names from a single thought, which, expressed in the language of the pioneers of western America, is: "Thar's gold in them thar hills."

Bulletin No. 3, March 12, 1945.



Frank Fortson

GOLDEN, COLORADO, IS ONE OF THE WEST'S ALLURINGLY NAMED TOWNS

Both gold and silver, precious metals whose real or imagined presence has inspired many an explorer or first-settler to sprinkle come-hitherish place names over the globe, have been mined in Golden, 15 miles west of Denver. Its glittering name is a coincidence, however, as it was named for Tom Golden, an early miner. During the 1870's, five smelters here refined nearly \$1,250,000 worth of gold and silver ores annually. The Colorado School of Mines, located here, ranks as one of the best mining colleges in the country. Clear Creek splits the wall of the Rockies and divides the town. Buffalo Bill is buried near the double hairpin curve atop Lookout Mountain, to the left of the creek.

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Geo-Graphic Brevities

DISTANCE TO TOKYO HALVED BY IWO JIMA LANDING

THE "toughest fighting" in 168 years of Marine Corps history brought man-made fireworks to a spot where nature usually puts on the show. Iwo Jima, the largest island in Japan's well-named Volcano group (Kazan Retto), is noted as a center of volcanic disturbances.

By landing on Iwo Jima, the Marines cut almost exactly in half the distance to Tokyo from the nearest United States ground force. This eight-square-mile island forms the halfway link of the chain of islands connecting the Marianas with Honshu. Saipan, formerly the farthest permanent surface penetration of Japan's inner circle of defense, lies 725 miles south of Iwo; Tokyo is 760 miles north.

Iwo Jima, or Naka Iwo, is the central member of the Volcano group of three islands. The cluster was named for volcanoes on Iwo Jima, and is famous among sailors for the strange and spectacular phenomena that occur in its neighborhood.

Submerged volcanoes thereabouts fling mud and ashes high into the air, to the accompaniment of sulphur smells and ominous rumblings. There is an active undersea volcano just off the smoking and sulphurous north shore of Iwo Jima.

Islands appear and disappear mysteriously in this region. One jack-in-the-box bit of land two and a half miles around rose suddenly above the surface in 1904. Within a couple of years, however, it had "gone back where it came from."

The three Volcano Islands are all small. Iwo Jima, the largest, is about five miles long, from southwest to northeast. With its big bulge in the north and tapering southern point, it resembles on the map a miniature continent of South America. Normally, fishing boats ran from island to island. A steamer made trips from the main Jap islands to Iwo Jima about once a month. Ships anchored on the northwest and southeast sides of the island, depending on the winds.

Iwo Jima (Sulphur Island) is generally barren and rocky, with rain water for its only drinking supply. An extinct volcano rises on the southern tip well over 500 feet. Reefs and ledges, as well as a strong surf, make shipping dangerous along much of the Iwo Jima coast. In places there are steep cliffs.

Iwo Jima means rock island in Japanese. The alternative name Naka Iwo is translated as middle or in-between rock, a practical description of its position between the other two islands. In spite of the physical disadvantage of life on this island, it had a population of nearly 1,000 some time before the war. The inhabitants of all three islands were reported to number about 1,200.

Note: Iwo Jima is shown on the National Geographic Society's Map of Japan and Adjacent Regions, issued as a supplement to the *National Geographic Magazine* for April, 1944.

See also, "Springboards to Tokyo," in the *National Geographic Magazine* for October, 1944; and "Mysterious Micronesia," April, 1936*. (Issues marked with an asterisk are included in a special list of *Magazines available to teachers in packets of ten for \$1.00.*)

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A BOX STORY: CRATES AND BOXES MONOPOLIZE LUMBER SUPPLIES

MOST of the lumber produced in the United States today is used as shipping boxes and crates for materials destined for the fighting fronts. Some find final use as windbreaks and temporary shelters for Yanks in the battle zones.

Shipping boxes and crates for overseas delivery last year required as much

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edge of a dipper the batch was done. If hard sugar was desired, the test was made with a snowball. The ball was plunged into the kettle and quickly withdrawn. The film of sirup adhering to the snow was struck with a knife. If it proved brittle, the sirup was taken off the fire, stirred rapidly, and poured into molds. To get soft sugar—"spoon sugar"—the boiling was stopped before the sirup reached the brittle stage. This type is marketed in pails, from which it may be scooped with spoons and spread in a rich, sticky paste on waffles.

"Sugaring off" parties marked the end of good runs in New England. Pop-corn balls sticky with sirup, and "leather aprons"—sirup-coated snow strips shaped in pans—were the refreshments.

Old methods have been succeeded in some measure by better forestry, which preserves the trees. New ways of collecting the sap (illustration, below) and processing it by temperature and density control with instruments have improved the output. Before wartime restrictions took effect, the trend was toward tin buckets hung on wire hooks attached to metal spouts. Sap was piped to vats placed near sugar houses. From the vats the sap ran automatically into evaporators which converted it into sirup or sugar, depending upon the length of time it remained in the evaporator.

Bulletin No. 4, March 12, 1945.



Walter H. Crockett

A VERMONT FARMER SAVES A DOUBLE SET OF RATION STAMPS

This Vermont farmer is saving a double set of ration stamps—sugar and gasoline. The horses, matching the snowy ground of this "sugar bush"—a grove of sugar maples—drag a stone boat through paths among the trees too narrow for a motor truck. Big tin pails are hung on the trees to collect the sap. When the pails are full the sap is dumped into the wooden vat on the stone boat. After a round trip through the bush the horses will drag the sweet white liquid to the sugar house to be processed into maple sirup and sugar to add to the nation's war-shortened sugar supply.

SAVE WASTE PAPER

Paper is essential to victory. Save every scrap of it. Your local salvage committee will tell you how waste paper helps win the war.

lumber as all other uses combined. Three-fourths of the several hundred thousand items shipped to the war zones are packed in wooden boxes.

Most war supplies are heavy, and need strong containers. The demand for wooden boxes is so great that the United States imports some from Canada and Mexico to augment supplies. Even jeeps are boxed for shipment abroad.

There are at least five hundred wooden-box plants widely scattered over the United States, employing about 25,000 workers. Their production has been almost tripled since the war began.

* * * * *

FAMOUS VOLCANOLOGIST WINS BURR PRIZE

DR. Thomas A. Jaggar, famous volcanologist, was awarded the Franklin L. Burr Prize of \$1,000 by the National Geographic Society, it has been announced by Dr. Gilbert Grosvenor, President of the Society.

The prize was established by the late Mary C. Burr of Hartford, Connecticut. In memory of her father, she bequeathed a fund providing cash prizes for those members of the Society's expeditions considered by the Geographic Board of Trustees to have done especially meritorious work in the geographic sciences.

The award was made to Dr. Jaggar for his part in the development in 1927 of the first "Duck" or amphibian mobile boat. This land-water craft (illustration, below) was the forerunner of the amphibian vehicles which have made possible landings by Allied forces in Europe and the south and central Pacific.

The "Duck," named by its designer the "Sea Turtle," was used in 1927-28 by a National Geographic Society expedition headed by Dr. Jaggar to carry on researches in Alaska in the region of Pavlof Volcano.

Bulletin No. 5, March 12, 1945.



Richard H. Stewart

THIS PREWAR LANDING CRAFT AIDED A NATIONAL GEOGRAPHIC EXPEDITION

Standing beside the *Honukai* (Hawaiian for sea turtle) is Dr. Thomas A. Jaggar, famous volcanologist and recent recipient of the Society's Burr Prize. The *Honukai*, unlike today's amphibian vehicles, was used in a peaceful pursuit; it served Dr. Jaggar and the National Geographic Society Expedition which studied the Pavlof volcanic area on the Alaska Peninsula. Many bays and inlets, with rocky headlands jutting into the water, made transport by land alone out of question in the area; hence, the *Honukai*. Weighing 3,700 pounds and measuring 21 feet in length, this forerunner of the armed forces' "Duck" was equipped with a Ford engine, dual rear tires, and had enclosed water-tight compartments. The radiator sat on top of the cabin, and the cooling system included a pipe which ran below the water line.

